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Honorable Jeffrey Runge, M.D., Administrator
National Highway Traffic Safety Administration
U.S. Department of Transportation
400 Seventh Street, S.W.
Washington, D.C. 20590

NHTSA-03-M345-11

PETITION

For more than thirty years, NHTSA has had the opportunity to prevent power window incidents inflicting death and injury by requiring manufacturers to install proper preventive mechanisms, but has neglected to do so. Since FMVSS 118 took effect on February 1, 1971, at least 33 children have been killed[1] and thousands more children and adults have been injured[2] by power windows. These tragedies could have been prevented had manufacturers been required to install fail-safe technology to ensure that occupants could not be trapped in rising windows. Such technology is now widely and voluntarily employed in the European market, even by the automakers that have vigorously opposed such requirements in the United States.

The Center for Auto Safety (CAS), Public Citizen, KIDS AND CARS (KAC), Consumer Federation of America (CFA), Advocates for Highway and Auto Safety, the Zoie Foundation, the Trauma Foundation, and Consumers for Auto Reliability and Safety (CARS) petition the National Highway Traffic Safety Administration (NHTSA) pursuant to 49 C.F.R. 552 to initiate rulemaking for the purpose of amending Federal Motor Vehicle Safety Standard 118 (FMVSS 118) to protect children from death and injury involving power-operated windows and roof panels.

Petitioners request that NHTSA propose modifying FMVSS 118 to require anti-trap mechanisms in all motor vehicles that would reverse the direction of power window operation when an obstruction is encountered. Petitioners also request that NHTSA propose requiring all manufacturers to install power window controls to prevent inadvertent engagement by occupants. We note that two separate rulemakings have remained open on these issues since 1996. We request immediate regulatory action by NHTSA to resolve these uncompleted rulemakings and thereby avoid further death and injury. Petitioners also support the petition filed earlier this year by the Zoie Foundation, which requested similar modification of the standard.

The case of power windows injuries requires special attention since the majority of the victims in these cases are children, particularly young children who typically are under the age of five.[3], [4] The injuries that children receive tend to be more severe since they are more likely to involve head and neck injury than the injuries sustained by adults. In addition, it takes less force

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to inflict injuries on a young child. In the past, NHTSA has chosen to be particularly careful in regulating equipment and vehicle components that represent a special risk of harm to children, especially since children are not as vigilant as adults in understanding and anticipating potential sources of death and injury.[5]

NHTSA has allowed this issue to linger for three decades without imposing stronger standards on automakers. No compelling reason exists that can justify further delay. More power window deaths have been recorded in the last two years than in any other two-year period since 1971.[6] NHTSA should act immediately to insure that new motor vehicles incorporate the safeguards necessary to end this epidemic.

Development of FMVSS 118

Regulation of power windows was first proposed in separate Notices of Proposed Rulemaking (NPRM) issued on August 23, 1969.[7] One of the notices addressed power window operation and proposed that automatic reverse switches be installed on all power windows as a failsafe mechanism to protect children.[8] However, the agency responded to nearly unanimous opposition from the industry by dropping the auto-reverse sensor requirement from the final rule promulgated in 1970.[9] The common thread of the manufacturers' comments argued that they were currently doing enough to protect children, not that the technology was unavailable or too costly.[10] With respect to the issues of cost and feasibility, two component parts manufacturers, H.T. Golde GMBH & Company and Robert Bosch, commented that the technology was available and could be affordably produced. H.T. Golde wrote on Nov. 7, 1969: ". . . [T]here will be no difficulties at all to technically safeguard the operational requirements set forth. . ." with respect to 69-11b. Despite these assurances, the agency cited "engineering and economic problems of a substantial magnitude"[11] in its decision not to require anti-trap mechanisms.

FMVSS 118 took effect on February 1, 1971, and imposed minimum performance requirements for power-operated windows. Since that time, FMVSS 118 has been expanded to include power roof panels,[12] and extended to light trucks.[13] However, the standard has been modified primarily at the behest of manufacturers wishing to increase occupant convenience rather than safety.[14] The current standard has not been substantively modified since March 31, 1993.[15]

FMVSS 118 provides a standard for the operation of power windows, moon roofs, sunroofs, and other "power operated roof panels" in passenger vehicles.[16] It prohibits the operation of any power window unless certain enumerated conditions are met. The key must either be in the ignition and be in an "approved" position,[17] the window may be raised or lowered by means of direct manual force, the window may be closed by means of a locking system on the exterior of the vehicle,[18] the window may be closed by a remote actuation device,[19] the key has

been removed from the ignition but neither of the front doors to the vehicle have been opened, or the window was open no more than four millimeters and was in a static position prior to being closed. These safeguards have not adequately protected children located in or around vehicles not in operation. Children were still able to engage these switches, with resulting deaths and injuries.[20]

Federal Motor Vehicle Safety Standard No. 118 Inaction

Power windows and sunroofs may deviate from the current regulatory requirements if they are equipped with an automatic reversing mechanism and meet the requirements of FMVSS 118 S5.[21] Though this section of the standard provides requirements for how auto-reverse mechanisms are to function in vehicles equipped with such technology, it fails to require manufacturers to use auto-reverse technology in production. The standard also does not require manufacturers to take other, additional steps to prevent the inadvertent operation of power windows that may lead to injuries absent the use of auto-reverse technology. In response to a petition by Prospects Corporation, NHTSA issued a proposed rule on June 4, 1996, that amended FMVSS 118 to require auto-reversing windows and roof panels. Since that time, however, no action has been taken on this rulemaking.

FMVSS 118 also does not currently include a requirement to prevent power window switches from being inadvertently tripped. Although a large number of manufacturers world-wide have installed push/pull type switches to prevent such incidents, many continue to use the unsafe toggle or rocker type switches that can be activated by an occupant's elbow, knee, or other appendage with the potential for a moving window or panel to entrap an occupant as the tragic result. A rulemaking intended to remedy this problem was proposed by NHTSA on November 11, 1996, in response to a petition by Michael Garth Moore.[22] Inexplicably, this rulemaking has also remained in limbo for more than seven years without further action. Even though a majority of manufacturers have decided to include such technology in their vehicles, other manufacturers have failed to incorporate these safety designs into their vehicles, and NHTSA has taken no action to require these fail-safe designs for all new vehicles.

Human Cost of NHTSA Inaction

Petitioners' Data

Since the standard was extended to power roofs in all vehicles starting with model year 1993, Petitioners have collected information on 37 incidents involving power windows.[23] Twenty-three of these incidents resulted in child fatalities, [24] and fourteen involved injuries. These figures represent a mere fraction of the injuries actually attributable to power windows in

vehicles, and do not reflect every fatality which has occurred. As noted in NHTSA's 1997 study, more than 400 such injuries may occur in any year, and only a few of those will come to our attention.[25] We do not have any way to officially monitor what may be the best sources of information on the subject. Furthermore, since very few documented power window injuries occur as the result of motor vehicle collisions, NHTSA has not tracked or tabulated data associated with deaths or injuries in the Agency's two most comprehensive databases, the Fatality Analysis Reporting System and the National Automotive Sampling System.[26]

NHTSA Data

In May of 1997, NHTSA published the results of a study completed in conjunction with the Consumer Product Safety Commission (CPSC) on power accessory related deaths and injuries. In that study, NHTSA estimated that approximately 499 people are treated each year in hospital emergency rooms for injuries that result from the use of power accessories.[27] An estimated 93 percent of those treated were injured by the power windows in their cars. In the vast majority of cases, the power windows were functioning as intended.[28] In addition, the NHTSA study recognizes the special risk to children in such cases. NHTSA estimates that approximately 32 percent of people injured by power windows are under the age of six and another 32-percent are between the ages of six and 15.[29] In addition, while only 10 cases were used for the study, with none of those cases involving fatalities, NHTSA recognized the fact that some of the estimated 499 Power Accessory related injuries that occur each year do result in fatalities: "NHTSA is aware of reported cases from other sources involving fatalities, particularly to children."[30]

The Case for Immediate NHTSA Action

The Technology to Abate Deaths and Injuries is Available and Feasible

The first patent for a power window that stopped closing upon contact with an object obstructing window operation was granted in 1932 to Ralph McNutt.[31] Since McNutt's patent nearly 70 years ago, at least 14 additional patents for auto-reverse mechanisms on power windows have been granted.[32] Nevertheless, only a fraction of American vehicles are produced with auto-reverse sensing technology. However, many vehicles that are produced in the United States without auto-reverse technology have European counterparts that are being sold equipped with such "anti-trap" sensing technology.[33] The fact that these vehicles are being produced in Europe demonstrates that the technology is widely available and that equipping passenger vehicles with this injury-preventing design does not affect cost so significantly as to eliminate the availability of this safety option. In fact, recent estimates indicate that auto-reversing technology may cost as little as $8.00 to $12.00 per component.[34] Even if the entire cost was

passed on to the consumer, the cost will not exceed $60 on a four-window vehicle with a sunroof. Petitioners believe that the lifesaving and injury prevention benefits of such technology would far outweigh the cost per vehicle for installing anti-trap sensors.

Related Safety Regulations Have Succeeded in Reducing Deaths and Injuries

The case of power window regulation parallels in many ways the Consumer Product Safety Commission's (CPSC) experience with garage doors. In 1991, the CPSC required automatic garage door manufacturers to install automatic reversing mechanisms on all new power garage doors due to the large number of children who were dying or sustaining brain damage when they became trapped under closing automatic garage doors.[35] However, the safety of garage door mechanisms did not improve significantly until 1993 when the CPSC upgraded the existing standard to require two types of automatic garage door reversing mechanisms.[36] Currently, all garage doors must be equipped with both "electronic eyes," which determine the presence of an obstruction prior to contact, and "pressure sensors," which automatically reverse the operation of the garage door when the leading edge of the door contacts an obstruction.

Prior to 1993, only pressure sensors were required on garage doors. A study conducted in 1997 demonstrated that garage doors built between 1974 and 1993 resulted in 85 documented cases of severe brain damage and death, even though the 1991 standard required auto-reverse mechanisms.[37] Furthermore, a field test of doors manufactured prior to the 1993 upgrade demonstrated that doors either failed to reverse or exerted excessive pressure that could cause skeletal or visceral injuries, despite the fact that doors manufactured after 1991 should not have malfunctioned in such a manner.[38] However, doors manufactured after the strengthening of the standard in 1993 experienced none of these safety problems.[39] In the case of the garage door manufacturing industry, an upgraded standard was necessary before the operation of the equipment reached acceptable levels of safety.

Simple Defects Can Turn Deadly Absent Fail-Safe Safety Designs and Operation

When a power window fails to operate as the standard specifies, children are placed at proven risk of injury since no fail-safe mechanism has been provided. This was the case with Defect Petition 87-022, which was upgraded to EA88-005 and ultimately became the subject of a recall, 87V-178. In this case, 1982-86 Jeep Wagoneers equipped with tailgate power windows were defective. The power tailgate window, designed to close by means of keyed operation on the exterior of the vehicle, was only supposed to operate while the operator was applying continuous pressure to the keyed mechanism. However, the window operated even without continuous pressure, and in several cases children operating the window were were trapped even after they had ceased to apply pressure to the key. CAS documented three fatalities and three injuries associated with these vehicles, all of which involved child victims.[40]

NHTSA's Failure to Act Will Result in Further Deaths and Injuries

While NHTSA has policed power window technology to some extent, strengthening the standard is clearly necessary in order to prevent the numerous injuries that power windows are causing. While the 1991 upgrade to include power roofs was an important step in improving the safety of power accessories, NHTSA has continually avoided or rejected the opportunity to require manufacturers to install auto-reversing technology.[41] Currently, NHTSA has allowed rulemaking proposals that, with appropriate improvements, could effectively eliminate these deaths and injuries to languish for almost seven years without taking effect. During these seven years, 18 fatalities have been recorded due to power window entrapment, more than had been recorded in the previous 25 years of NHTSA regulation in this area -- a total of 15 deaths.[42] Even absent this apparent rise in fatal incidents, the sheer number of injuries and deaths documented by the agency and by petitioners demonstrate the unarguable need for additional regulation in this area.[43]

The increase in power windows casualties has tracked the increase in power window installations. In 1973, only 1.9 million new vehicles (19.2%) produced in North America had power windows. Automotive News Market Data Book (1974). By the 1994 model year (the latest year for which Automotive News publishes information), 68.1% (4.6 million passenger cars) and 55.3% (3.3 million light trucks) for a total of 7.9 million new vehicles produced in North America had power windows. Automotive News Market Data Book (1995).

This growth in power window sales suggest that other power options such as power sliding doors in minivans will have similar market share increases. Rather than wait for more deaths and injuries to mount as NHTSA has done with power windows, the agency should be proactive in the area of other power options and establish safety performance standards that protect children from entrapment and injury.

Petitioners Seek the Following Changes to FMVSS 118

Petitioners ask NHTSA to propose upgrading the standard to require manufacturers to install sensing technology that would reverse the operation of a power window in the event that an obstruction intervenes during the window's closing. In addition, petitioners request that NHTSA require the installation of power window switches that protect against inadvertent activation. Petitioners ask NHTSA to immediately initiate this new rulemaking proposal or, in the alternative, to reopen the two rulemaking actions on this subject that have been neglected since 1996.

Automatic Reversing Mechanism

Unless the agency believes an even more protective standard can be implemented, petitioners request that NHTSA propose modifying FMVSS 118 S4 to require that all power window and roof systems are capable of immediately reversing direction in the manner described in the current standard under heading S5.[44] We are aware of the alternative language proposed by the agency in its June 4, 1996 NPRM, and recommend that the agency consider whether the proposed language therein[45] would be more beneficial to occupant safety than that currently found under heading S5.

Window Switches

Petitioners also ask that NHTSA propose modifying FMVSS 118 to ensure that power window switches cannot be inadvertently engaged by occupants. The agency proposed a countermeasure in its proposed rule of November 15, 1996, but the proposed 25 mm diameter ball for testing compliance was indicated by the agency to simulate only a knee or the flat tissue portions of limbs.[46] Comments were filed with NHTSA by one of the petitioners that questioned the exclusion of children's elbows from the agency's considerations.[47] Certain switch designs permitted by a 25 mm ball compliance test would still permit inadvertent switch engagement by a small child's elbow and, hence, would not ensure that children would not continue to be harmed by closing power windows and other panels in motor vehicles.

Accordingly, petitioners believe that the agency should move aggressively to abate power switch-related entrapments and consequent injuries, especially those involving small children, by effectively eliminating the use of toggle and rocker switches, as well as preventing the use of other designs that also could be easily and inadvertently engaged by children. In this regard, the agency should consider proposing the use of the pull-up/push-down switch designs already widely used by vehicle manufacturers, including both European and Asian manufacturers. As with its earlier heavy vehicle anti-lock brake regulatory decision,[48] the agency could effectively merge safety performance goals and requirements with design-specific characteristics of power switches to ensure that fail-safe countermeasures will be embraced by all manufacturers while still permitting some design flexibility. Pull-up/push-down switches, as just mentioned, are currently required by a European Union directive in order to ensure that inadvertent switch activation is minimized.[49]

Conclusion

In 1969, when NHTSA issued the first recommendations for a power window standard, including fail-safe reversing technology, automakers argued that requiring the key to be in the ignition before the power window could be operated would be sufficient to prevent further child strangulations. Thirty years later, we have learned that NHTSA's reliance on such assurances was misplaced, given that at least 33 children have been killed by power windows.[50] When it comes to child safety, we must rely on strong, effective regulation rather than on assurances.

Respectfully submitted,

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Center for Auto Safety

Joan Claybrook
President
Public Citizen

Janette Fennel
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Judith Stone
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Consumer Federation of America

Rosemary Shahan
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Britt Gates
The Zoie Foundation

Andrew McGuire
Executive Director
Trauma Foundation

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[1] See Attachment A, "Power Window Fatalities Since February 1, 1971"

[2] See NHTSA *Technical Report: Injuries Associated with Specific Motor Vehicle Hazards: Radiators, Batteries, Power Windows, and Power Roofs,* July 1997. (400+ power window injuries recorded in one year.)

[3] See Attachment L. Approximately 90% of the incidents that petitioners have recorded involve children under age

10 as victims.

[4] In the past 10 years, at least 23 children have died due to the inadvertent operation of power windows. There are no reports of adult deaths due to power windows.

[5] For example, after receiving the accounts of 11 child fatalities in vehicle trunks, NHTSA was Congressionally mandated to respond to the trunk entrapment problem. In response, the Agency appointed an advisory committee to address the issue of trunk entrapment. 64 Fed. Reg. 70673, Dec. 17, 1999. Ultimately, the work of the committee led to the Agency's issuing a Notice of Proposed Rulemaking requiring manufacturers to install internal trunk release mechanisms. Congress has required NHTSA to be more attentive in the area of school bus safety. School bus manufacturers are required to meet additional vehicle safety standards not imposed on motor coaches due to the fact that school buses are designed to carry children.

[6] See Attachment A.

[7] 34 Fed. Reg. 13608-09, Aug. 23, 1969.

[8] 34 Fed. Reg. 13609, Aug. 23, 1969.

[9] 35 Fed. Reg. Fed. Reg. 11797, July 23, 1970. The Agency received comments in opposition to the auto-reverse proposal from the American Manufacturers' Association (AMA), American Motor Company, Daimler Benz, Checker Motors Corporation, Chrysler Corporation, Ford Motor Company, General Motors, Kaiser Jeep Corporation, Renault, and Rover Limited. Only the Japanese Automobile Manufacturers' Association (JAMA), the National Association of Motor Bus Owners (NAMBO), and Peugeot did not vigorously oppose the auto-reverse proposal.

[10] In their comments to the Department Daimler Benz wrote:

> We feel that the needs of safety . . . are satisfied by our present production vehicles. Our power windows work only as long as the ignition is turned on. . . Thus, children who should occupy the rear seat only, cannot operate those windows, unless the driver permits it, and thus cannot inadvertently injure themselves . . .

Rover commented: "We feel strongly that the measures which we already take to avoid danger to children . . . should be sufficient."

The AMA, who was joined in its comments by Chrysler, Ford, and General Motors, stated: "We believe that this method of power window control [key position] effectively precludes the primary hazard. . . [regarding] children closing windows on themselves or others."

[11] 35 Fed. Reg. 11797, July 17, 1970.

[12] 58 Fed. Reg. 16785, Apr. 16, 1991.

[13] 53 Fed. Reg. 23766-69, June 24, 1988.

[14] See 39 Fed. Reg. 1517, Jan. 10, 1974: "It [General Motors] claims no safety benefit for the feature but states that it is a convenience item ... ," 47 Fed. Reg. 13845, April 1, 1982: "Such a provision would permit GM and other manufacturers to offer power window and partition systems that are more convenient to use than those currently allowed by the standard." See also 53 Fed. Reg. 23766-69, June 24, 1988, and 56 Fed. Reg. 15290-95, April 16, 1991, which modified FMVSS 118 to allow for exterior key and remote-control window operating devices.

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[15] 58 Fed. Reg. 16785, Mar. 31, 1993.

[16] 49 C.F.R. 571.118 S1.

[17] The standard requires that the key be in any of the three following positions: (a) ON, (b) START, or (c) ACCESSORY. 49 C.F.R. 571.118 S4.

[18] For example, the window may be closed by touching an external panel on the vehicle's door or through turning the key to raise the window.

[19] A remote actuation device may only function by continuous activation by the user at a distance of six meters or less in order to comply with the requirements set out in FMVSS 118 S4.

[20] A case in point is DP 87-022, involving 1982-86 Jeep Wagoneers (See Attachment B). The vehicles were the subject of six reported cases of injuries and fatalities, despite the fact that they were manufactured in accordance with the existing regulation.

[21] A power window equipped with an automatic reverse sensor need only comply with the requirements of FMVSS 118 S5, in lieu of FMVSS 118 S4. Power windows or power sunroofs may be operable so long as while closing the power window would reverse before contacting a body part or before exerting a squeezing force of 100 Newtons or greater on a semi-rigid cylindrical pole and upon contact with an object, the window opens to one of three "acceptable positions": (a) the position that the window panel was opened to before operation of the power window began, (b) to a position 125 millimeters greater than the window opening size when the reversing motion began, or (c) enough to allow the insertion of a rod that is 200 millimeters in diameter.

[22] 61 Fed. Reg. 58504-07, November 11, 1996.

[23] See Attachment L for a summary of all fatalities and injuries petitioners have recorded.

A three year old boy in a 1994 Ford Taurus lost the tip of his finger when it became caught in the power window of the family vehicle (mother was operating window while vehicle was in motion). Philadelphia Inquirer, May 27, 1994. In December of 1995, a two-year old Plainfield, New Jersey girl died four days after her neck got caught in a power window; *Mishap Not New with Car Windows,* The Courier-News, Dec. 8, 1995. A four year old girl was killed by the power window of the family vehicle in LaCrosse, Wisconsin in October of 1997; National Library of Medicine MEDLINE Database, Vol. 13 #5, pp. 345-46. A two year old girl in Kokomo, Indiana suffocated to death from injuries sustained when her neck became trapped in the sunroof of a 1998 Dodge Neon; *Girl Dies in Freak Sunroof Accident,* Nando Times News, Oct. 11, 1998.

In addition, CAS has collected correspondence from consumers regarding this matter. See Attachments C-E. Joel Douglas of Bellingham, Washington wrote to us on June 16, 1998 to report that his hand was injured when his wife inadvertently shut the window while he had his fingers stuck in the opening. Gayle Walker sent us correspondence regarding an similar injury she sustained in April of 1998. On January 31, 1998, Steven Borden's fourteen month old son lost the tip of his left index finger in the power window of the family's 1997 Isuzu Rodeo.

The following nine complaints detailing injuries caused by power windows have been received by the Office of Defects Investigations since the standard was last upgraded: ODI #469549 (Mar. 20, 1994, driver of a 1989 Ford Thunderbird injured by power window); ODI #960044 (Mar. 8, 1995, injury due to power windows occurred in a 1994 Chrysler New Yorker); ODI #965153 (May 9, 1995, driver's hand injured in power window when he tried to force window down manually in a 1990 Buick Regal); ODI #967805(June 16, 1995, occupant and dog's necks caught in power window of 1995 Ford Windstar by accidental operation); ODI # 980738 (Mar. 13, 1996, child injured by passenger side window in a 1991 Dodge Caravan); ODI #800484 (July 26, 1996, driver sustained injury to finger due to inadvertent operation of power window in 1995 Mitsubishi Galant; ODI # 521408 (Nov. 4, 1997; child in a 1993 Pontiac Trans Sport was injured when driver tried to stop power window operation by sticking hand in path of window); ODI #532577 (Mar. 6, 1998, child's head injured in window of a 1995 Chevrolet

Sierra Pickup; ODI # 541408 (child's head smashed in the window of a 1997 Chevrolet Astro).

CAS has collected information on two non-fatal incidents and three fatal incidents of power windowrelated injuries reported by the manufacturer. Chevrolet Motor Division reported the injury of a child in a 1992 Chevrolet Lumina in April of 1994 when she reached out of the vehicle to check the mail and was pinned between the power window and the door frame. Oldsmobile Motor Division reported a child getting caught between the power window and vehicle frame under the same circumstances in a 1993 Oldsmobile Supreme in April of 1993. See Attachment F, *Materials Supplied by Power Accessories Expert Jack Martens.* And Ford disclosed three incidents associated with power windows in the case of *Johnson v. Ford*, 988 F.2d 573 (5th Cir. 1993). (Natalie Adkins in June of 1995, 1993 Ford Tempo; Mike Gross in October of 1996, 1993 Ford Tempo; and Larry Smith in July of 1996, 1992 Ford Tempo.)

Attorneys have reported the following incidents of power window related injuries to power window expert Jack Martens. A two and a half year old boy was strangled to death by the accidental operation of a power window in a 1990 Mercury Topaz in Alabama (reported by attorneys Cole Portis and Beasley Wilson, Birmingham, AL). A child was injured by the inadvertent operation of the power window in a 1990 Mercury Topaz in Alaska (reported by attorney Robert Libby). A three year old child suffered a severed arm, when it got caught in the power window in a 1988 Ford Taurus (case filed in Los Angeles County Court). A man lost his finger in the window of his 1995 BMW in Connecticut (reported by attorney A. Piazza). A child was severely injured when her neck was caught in the window of a 1992 Cadillac Seville (reported by attorney Donna Taylor).

Finally, the following three court cases have been filed since the standard was last upgraded. *Gatlin v. Ford*, CV-97-609 Lauderdale County Court, AL (three year old boy was strangled to death by the power window in a 1993 Mercury Topaz); *Householder v. Chrysler*, #22686 Perry County, OH 1992 (three year old strangled to death by power window on a 1987 Plymouth Voyager *Holum v. General Motors,* 221 Wis. 2d 222 1998 (four year old girl strangled to death by power window in a 1993 Chevrolet Silverado Pickup).

[24] See Attachment A.

[25] NHTSA, *Technical Report: Injuries Associated with Specific Motor Vehicle Hazards: Radiators, Batteries, Power Windows, and Power Roofs,* July 1997, 25.

[26] "To be included in FARS, a crash must involve a motor vehicle travelling on a traffic way customarily open to the public, and result in the death of a person (either an occupant of a vehicle or a non-motorist) within 30 days of the crash." See http://www-nrd.nhtsa.dot.gov/departments/nrd-30/ncsa/FARS.html. "NASS collects crash data to help government scientists and engineers analyze motor vehicle crashes and injuries. NASS collects detailed data on a representative, random sample of hundreds of thousands of minor, serious and fatal crashes involving passenger cars, pickup trucks, vans, large trucks, motorcycles, and pedestrians." http://www-nrd.nhtsa.dot.gov/departments/nrd-30/ncsa/NASS.html. Therefore, if no collision is involved, NHTSA does not have a readily searchable database available to determine the breadth and depth of the problem.

[27] NHTSA, *Technical Report: Injuries Associated with Specific Motor Vehicle Hazards: Radiators, Batteries Power Windows, and Power Roofs,* July 1997, p. 25.

[28] NHTSA estimates that approximately 465 injuries per year that are treated in the emergency room are attributable to power windows. *Id.* 437 of these injuries occur when the power window is closed and clamps down on a hand, finger, or wrist. *Id.* at 26. In other words, approximately 94% of power window related injuries occur when the window is being operated as intended.

[29] Approximately three hundred and sixteen children (64% of those injured) are the victims of power window related injuries. *Id.* at 28.

[30] *Id.*

[31] Patent 1,864,048 (June 21, 1932).

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[32] In 1959, Robert Russell of Eaton Manufacturing obtained the first patent for a window that would not just stop but would actually reverse upon contact. Patent 2,881,378 (April 7, 1959). Additional patent include: Patent 3,174,743 (Mar. 23, 1965), Patent 3,513,374 (Sept. 5, 1968), Patent 3,465,476 (Sept. 9, 1969), Patent 3,471,969 (Oct. 14, 1969), Patent 3,624,473 (Nov. 30, 1971), Patent 3,689,814 (Sept. 5, 1972), Patent 3,675,101 (July 4, 1972), Patent 3,702,960 (Nov. 14, 1972), and Patent 3,733,532 (May 15, 1973). Additionally the following automobile manufacturers have obtained for patents on various auto-reversing technology for vehicle windows: Daimler-Benz, Patent 2,911,212 (Nov. 3, 1959); Nippon Denso, Patent 3,689,814 (Mar. 21, 1972); General Motors, Patents 3,581,174 (May 25, 1971) and 3,644,811 (Feb. 22, 1972); and Toyota, 3,830,018 (Aug. 20, 1974).

[33] See Attachment G, *Systems for Car Doors and Seats,* 14.

[34] Confirmed by the Brose Group. See also Attachment H, Nartron Corp. letter confirming a $12.50 cost per component.

[35] 15 U.S.C.A. §2056 describes both the pre-1993 and post-1993 requirements. 15 U.S.C.A. §2056 (1999). *See also* 16 C.F.R. §1211 spelling out the regulatory mandate.

[36] 15 U.S.C.A. §2056 (1999).

[37] Kriel, Robert L. et al. *Automatic Garage Door Openers: Hazards for Children,* Pediatrics, Oct. 1996, p. 1.

[38] *Id.*

[39] *Id.*

[40]See Attachment B, CAS petition to the Agency and Press Release documenting the incidents involving the affected Jeep vehicles.

[41] On April 6, 1990, NHTSA published a notice of proposed rulemaking to extend the standard to include power sunroofs and to require the installation of auto-reverse sensing technology. 55 Fed. Reg. 12871-74 (Apr. 6, 1990). In 1991, NHTSA did incorporate power sunroofs into FMVSS 118. 56 Fed. Ref 16782-85 (Mar. 31, 1993). The final rule published in 1993 failed to incorporate the auto-reverse requirement. 58 Fed. Reg. 16782-85 (Mar. 31, 1993). Furthermore, NHTSA rejected a similar petition in November of 1996 though it granted a requirement for manufacturers to adequately shield switches. As noted above, the granted petition has not been promulgated in the form of a final rule, and has been inactive for almost seven years. 61 Fed. Reg. 58504-07 (Nov. 15, 1996).

[42] See Attachment A.

[43] See *supra* n. 16.

[44] S5 text

[45] The June 4, 1996, NPRM recommends the following changes to FMVSS 118:

Sec. 571.118 Standard No. 118; Power-operated window, partition, and roof panel systems.

* * * * *

S3. Definitions.

* * * * *

Infrared reflectance means the ratio of intensity of infrared light reflected and scattered by a flat sample of the test rod material, to the intensity of infrared light incident on that material, as measured by the apparatus shown in Figure 2.

* * * * *

S5. (a) A power operated window, partition, or roof panel system that meets the requirements in paragraphs (1) through (2)(iii) may close in circumstances other than those specified in S4--

(1) Except as specified in S5(b), while closing, the window, partition or roof panel system must halt and reverse direction either before

(i) Contacting, or

(ii) Exerting a squeezing force of 100 Newtons or more on a semi-rigid cylindrical rod that has the properties described in S6(b), and that is placed through the window, partition or roof panel system opening at any location, in the manner described in S6(a); and

(2) Upon such reversal, the window, partition or roof panel system must open to one of the following positions, at the manufacturer's option:

(i) A position that is at least as open as the position at the time closing was initiated;

(ii) A position that is not less than 125 millimeters more open than the position at the time the window reversed direction; or

(iii) A position that permits a semi-rigid cylindrical rod that is 200 mm in diameter to be placed through the opening at the same contact point(s) as the rod described in S5(a)(1).

(b) A closing window, partition, or roof panel system need not reverse direction as required in S5(a)(1) if it can halt upon entry of any portion of a 15 mm cylindrical test rod at any location within a zone bounded by:

(i) The interior surface of the closed window, partition, or roof panel,

(ii) A surface 50 mm inboard of that surface,

(iii) The portion of the window, partition, or roof panel frame that the window, partition, or roof panel closes against, and

(iv) A surface 100 mm from that part of the frame.

(c) If a vehicle uses the principle of proximity detection by infrared reflection to halt the powered window, partition, or roof panel before it contacts the test rod, the infrared source shall project infrared light at a nominal wavelength of not less than 850 and not more than 1050 nm.

S6. Test procedures for determining compliance with S5.

(a)(1) For testing power window, partition, or sunroof systems designed to detect contact with the test rod, place the test rod through the window, partition, or roof panel opening from the inside of the vehicle such that the cylindrical surface of the rod contacts any part of the structure with which the window, partition, or roof panel mates. Typical placements of test rods are illustrated in Figure 1. Attempt to shut the power window, partition, or roof panel.

(2) For testing power window, partition, or sunroof systems designed to detect the proximity of the test rod using infrared reflectance and to halt the powered window, partition, or roof panel before it contacts the test rod, this test is conducted with the vehicle in direct sunlight. Place a stationary test rod anywhere in the window, partition, or roof panel opening, with the window, partition, or roof panel in any position. Attempt to close the window, partition, or roof panel. Remove the test rod. Fully open the window, partition, or roof panel and then begin to close it. While the window, partition, or roof panel is closing, move a test rod so that it approaches the window, partition, or roof panel, or its frame, in any orientation from the interior of the vehicle.

(b) Test rods.

(1) Test rods are of cylindrical shape in the range of diameter from 4 mm to 200 mm, except that a single 15 mm diameter rod shall be used to test power window, partition, or sunroof systems that detect the proximity of a test rod using infrared reflectance.

(2) For testing power window, partition, or sunroof systems that detect contact with the test rod, the force-deflection ratio of the test rod is not less than 65 N/mm for a rod 25 mm or smaller in diameter, and not less than 20 N/mm for a rod larger than 25 mm in diameter.

(3) For testing power window, partition, or sunroof systems that detect the proximity of the test rod using infrared reflectance, the test rod shall meet the following requirements:

(i) The infrared reflectance of the rod surface material is not less than 0.7 percent, when measured using the apparatus shown in Figure 2.

(ii) The infrared reflectance of the rod surface material is measured using a flat sample and an infrared light source and sensor operating at a nominal wavelength of 950 nm.

(iii) The intensity of incident infrared light is determined using a mirror of nominally 100 percent reflectance mounted in place of the sample.

(iv) Measurements of the test rod surface sample and the mirror are corrected to remove the contribution of infrared light reflected and scattered from the sample holder and other parts of the apparatus before the computation of the ratio.

[46] 61 FR 58504, 58506.

[47] Comments of Advocates for Highway and Auto Safety, January 7, 1997, in response to the proposed rulemaking of Docket No. NHTSA-96-117, 61 Fed. Reg. 58504 *et seq.* (November 15, 1996).

[48] See 49 C.F.R. 571.121 *passim.*

[49] Directive 2000/4/EC of the European Parliament and of the Council, Official Journal L 87/22, Apr. 28, 2000.

Excerpts from 74/60/EEC, Directive 2000/4/EC, Annex I

(f) The following items are inserted:
'2.10. "Power-operated windows" means windows which are closed by power supply of the vehicle.
2.11. "Power-operated roof-panel systems" means movable panels in the vehicle roof which are closed by power supply of the vehicle by either a sliding or tilting motion, and which do not include convertible top systems.
2.12. "Power-operated partition systems" means systems which divide a passenger car compartment into at least two sections and which are closed using the power supply of the vehicle.
2.13. "Opening" is the maximum unobstructed aperture between the upper edge or the leading edge, depending on the closing direction, of a power-operated window or partition or roof panel and the vehicle structure which forms the boundary of the window, partition or roof panel, when viewed from the interior of the vehicle or, in the case of partition system, from the rear part of the passenger compartment. To measure an opening, a cylindrical test rod shall (without exerting force) be placed through it normally perpendicular to the window, roof panel or partition as shown in Figure 1, from the interior of the vehicle or, as applicable, from the rear part of passenger compartment.'

The following items are inserted:

5.8. Power-operated Windows, Roof-panel Systems and Partition Systems

5.8.1. The requirements below apply to power-operated windows/roof-panel systems/partition systems to minimise the possibility of injuries caused by accidental or improper operation.

5.8.2. Normal Operating Requirements

Except as provided in Item 5.8.3, power-operated windows/roof-panel systems/partition systems may be closed under one or more of the following conditions:
5.8.2.1. when the ignition key is inserted in the ignition control in any position of use;

5.8.2.2. by muscular force unassisted by power supply of the vehicle;
5.8.2.3. on continuous activation by a locking system on the outside of the vehicle;
5.8.2.4. during the interval of time between the moment the ignition has been switched from "on" to "off" and/or the key has been removed and the moment that neither of the two front doors has been opened sufficiently to permit egress of occupants;
5.8.2.5. when the closing movement of a power-operated window, roof panel or partition starts at an opening not exceeding 4 mm;
5.8.2.6. when the power-operated window of a vehicle's door without an upper door frame closes automatically whenever the pertinent door is closed. In this case the maximum opening, as defined in Item 2.13, prior to window closing, shall not exceed 12 mm.
5.8.2.7. Remote closing shall be allowed by continuous activation of a remote actuation device, provided one of the following conditions is fulfilled:
5.8.2.7.1. the remote actuation device shall be incapable of closing the power-operated window/roof panel/partition from a distance of more than 11 metres from the vehicle;
5.8.2.7.2. the remote actuation device shall be incapable of closing the power-operated window/roof panel/partition:
-if the actuation device and the vehicle are separated by an opaque surface
and
-if from the distance between the remote actuation device and the vehicle is more than 6 metres.
5.8.2.8. One-touch closing shall be permitted only for the power-operated window of the driver's door and the roof panel, and only during the time when the ignition key is in the engine running position.

5.8.3. Auto-reversing Requirements

5.8.3.1. None of the requirements in Item 5.8.2. shall apply if a power-operated window/roof panel system/partition is fitted with an auto-reversing device.
5.8.3.1.1. This device shall reverse the window/roof panel/partition before it exerts a pinch force of more than 100 N within the opening of 200 mm to 4 mm above the top edge of a power-operated window/partition or in front of the leading edge of a sliding roof panel and at the trailing edge of a tilting roof panel.
5.8.3.1.2. After such an auto-reversal, the window or roof panel or partition shall open to one of the following positions:
5.8.3.1.2.1. a position that permits a semi-rigid cylindrical rod of a diameter of 200 mm to be placed through the opening at the same contact point(s) used to determine the reversing behaviour in Item 5.8.3.1.1;
5.8.3.1.2.2. a position that represents at least the initial position before closing was initiated;
5.8.3.1.2.3. a position at least 50 mm more open than the position at the time when reversing was initiated;
5.8.3.1.2.4. in the case of tilting motion of a roof panel, the maximum angular opening.
5.8.3.1.3. To check power-operated windows/roof-panel systems/partition systems with reversing devices, a measuring instrument/test rod shall be placed through the opening from the inside of the vehicle or, in the case of a partition system, from the rear part of the passenger compartment in such a way that the cylindrical surface of the rod contacts any part of the vehicle structure which forms the boundary of the window/roof-panel aperture/partition. The force deflection ratio of the measuring instrument shall be not more than 10 N/mm. The position of the test rods (normally located perpendicular to the window/roof panel/-partition) are illustrated in Appendix 3, Figure 1.

5.8.4. Switch Location and Operation

5.8.4.1. Switches of power-operated windows/roof panels/partitions shall be located or operated in such a way to minimise the risk of accidental closing. The switches shall require continuous actuation for closing except in the case of Items 5.8.2.6, 5.8.2.8. or 5.8.3.
5.8.4.2. All rear-window, roof-panel and partition switches intended for use by occupants in the rear of the vehicle

shall be capable of being switched off by a driver-controlled switch which is located forward of a vertical transverse plane passing through the R Points of the front seats. The driver controlled switch is not required if a rear window, roof panel or partition is equipped with an auto-reversing device. If, however, the driver-controlled switch is present, it shall not be able to override the auto-reversing device. The driver-controlled switch shall be located so as to minimise any accidental manipulating. It shall be identified by the symbol shown in Appendix 4.

5.8.5. Protection Devices

All protection devices which are used to prevent damage to the power source in the case of an overload or stalling shall be capable of resetting automatically while the switch controlling the window/roof panel/partition is activated.

5.8.6. Handbook Instructions

5.8.6.1. The owners manual of the vehicle shall contain clear instructions relating to the power-operated window/roof panel/partition, including:
5.8.6.1.1. explanation of possible consequences (entrapment),
5.8.6.1.2. use of the driver-controlled switch,
5.8.6.1.3. a "WARNING" message indicating the dangers, particularly to children in the case of improper use/activation of the power-operated windows/roof-panel systems/partition systems. This information should indicate the responsibilities of the driver, including instructions for other occupants and the recommendation to leave the vehicle only if the key is removed from the ignition lock,
5.8.6.1.4. a "WARNING" message indicating that special care should be taken when using remote closing systems (see Item 5.8.2.7), for example to actuate it only when the operator has a clear view of the vehicle to be sure that nobody can be trapped by power-operated windows/roof-panel/partition equipment'.

[50] In addition to the incidents cited earlier, petitioners have documented numerous incidents that occurred between February of 1971, when the standard first went into effect, and the 1993 modification. See below and Attachment L.

CAS has collected the following consumer letters reporting incidents of power window related injuries and fatalities involving children. A letter from Arnold W. Marque was sent to CAS in October of 1989, indicating that the writer's five year old granddaughter sustained injuries to her neck when her head became inadvertently trapped in the 1986 Ford Taurus's power window. Sue Tuemler reported the amputation of a passenger's finger by a power window in her mother's Chrysler. See Attachment I-J.

Three children died and three were injured by the power tailgate windows found in their families' Jeep Wagoneers and Cherokees. See Attachment B, *CAS Materials related the Jeep Wagoneer Investigation,* Nov. 7, 1987.

Power Window expert Tom Flannagan has collected the information on the following six incidents related to injuries and fatalities suffered by children since 1971. In 1980, an eight years old girl was injured in a 1971 Ford Torino and sustained brain damage and hypoxia as a result. In 1981, a child between the ages of four and six died from tailgate injuries sustained in a 1971 Ford Torino. In 1991, a five years old girl and her eight years old sister were injured in the family's 1991 Ford Taurus. That same year, a four year old boy was nearly strangled by the power window in a 1988 Pontiac Bonneville. See Attachment K.

Power Window expert Jack Martens has collected information on the following four incidents related to injuries and fatalities suffered by children related to power windows since 1971. A child was fatally injured by the power window in a 1984 Ford Thunderbird in May of 1988. In 1989, a child was fatally injured by the power window in a Oldsmobile Delta. A twenty-two month old baby lost his finger in the power window of a 1982 Pontiac Bonneville in 1990. That same year another child was injured by the same means in a 1986 Cadillac DeVille. In 1992, a child suffered injury when his finger got caught in the power window of a 1992 GMC Jimmy. See Attachment F.

The following ODI complaints specifically mention injury or fatality to children in motor vehicles due to the operation of power windows. ODI #148708, Oct. 21, 1987 (child hung by neck and injured in 1981 Jeep Grand

Wagoneer). ODI #349210, Nov. 9, 1989 (three year old child injured in power window of 1989 Ford Thunderbird). ODI #439116, Apr. 29, 1992 (two year old child nearly strangled by power window in 1986 Oldsmobile 98). ODI #437252, Aug. 15,1992 (two children injured by leaning out of the power tailgate window of a 1991 Lincoln Continental).

In addition, the following court cases contain accounts of the following incidents regarding power windows and children. *Kuehn v. Ford,* Wis. Cir. Ct. Milwaukee County, No. 94CV003051, 1994 (boy put in a coma by injuries sustained in family's minivan). *Goldberg v. GM,* Baltimore County Cir. Ct., File No. 92560, 1977 (three year old died from injuries received when rear window closed on child's neck).

Two incidents of fatalities were reported by the Association of Trial Lawyers of America (ATLA). See Attachment M for White Plains incident and Anchorage Alaska incident.

Finally, the CPSC tracked seven fatalities due to inadvertent power window operation in its *Special Report: Structural Entrapment Hazards to Infants and Children,* Sept. 1983, 6. No specific information was provided by the commission, and these cases may overlap those previously cited.

Attachment A

Power Accessory Fatalities after February 1, 1971

Case No.	Name	Incident Date	City, State	Make/Model/Year	Source	KAC Number
1	*	8/29/72	Wichita, KS	1965 Chrysler Imperial	Tom Flanagan Data - Atty Jerry Levy	KSP72
2	Goldberg	11/7/72	Baltimore, MD	1972 Oldsmobile Vista wagon	Jack Martens/GM Response to *Baker v. GM,* Atty Max Israelson	MDO5
3	Brinkley, Keith	5/27/79	Newport News, VA	1979 Jeep Wagoneer	Yergen v. AMC Complaint	VA02
4	Sprinkle, Julie Ann	7/80	York, PA	1971 Ford Torino	Jack Martens/GM Response to *Baker v. GM,* Atty William Hagerty	PAO3
5	*	5/81	White Plains, NY	1971 Ford Torino	Flanagan - Atty John Kelligrew	NYP80
6	*	1/1/84	*	1981 Jeep Wagoneer	NHTSA ODI ID # 148708	XYP84
7	Karp, Brian	7/3/87	Farmingdale, NY	1986 Jeep Wagoneer	Karp v. AMC, Automotive News 7/20/87	NY03
8	Yergen, Tel	7/31/87	Yakima, WA	1986 Jeep Wagoneer	Yergen v. AMC/Chrysler, Letter to CAS	WA08
9	Rice, Tiffany	1/20/89	Birmingham, AL	Oldsmobile Delta 88	Birmingham News 2/24/89, Amer.Jrnl.For.Med.Path.92	AL06
11	Kuehn, Luke	2/2/92	Madison, WI	1989 Ford Aerostar	Kuehn v. Ford, P.L. Reporter 5/9/94	WI06
12	Householder, Kaley	6/8/92	Hilliard, OH	1987 Plymouth Voyager	Jack Martens - Court of Common Pleas Perry Co. Ohio Case # 22686	OH15
13	Kirwin, Karen	11/20/93	La Crosse, WI	1993 Chevrolet Silverado Pick up	*Holum v. GM*	WI07
14	Baker, Daniel	4/19/94	Anchorage, AK	1994 Chevrolet Truck	Anchorage Daily News Article	AK01
15	Walker-Himes, Carolyn	11/21/95	Plainfield, NJ	1984 Buick Park Avenue	Police & M.E. Reports, Atty. Jack Wurgaft Letter	NJ03
16	Teague, Robert	4/8/97	Troy, AL	1990 Mercury Topaz	Jack Martens/Atty Cole Portis	AL07
17	*	8/97	Provo, UT	*	Deseret News (Salt Lake City)	UT06
18	Gatlin, Taylor	10/10/97	Florence, AL	1993 Mercury Topaz	Jack Martens/Atty G. Yearout, CV-97-609, Lauderdale Co., AL	IN02

Case No.	Name	Incident Date	City, State	Make/Model/Year	Source	KAC Number
19	Falkner, Stephen Matthew	1/7/98	Ottumwa, IA	1986 Oldsmobile	Parents' Website (http://www.batterystation.com/ family.steven.htm)	IA25
20	Dufresne, Mackenzie	5/2/98	Jacksonville, FL	1994 Ford Thunderbird	Accident Report, Atty. Lee T. Griffin	FL05
21	*	7/98	Kings County, WA	*	AP 7/15/98	WA18
22	Everhart, Kaylee	10/10/98	Kokomo, IN	1998 Dodge Neon	Kokomo Tribune, 10/12/98	IN02
23	Leggett, Keymone	2/9/99	Fort Myers, FL		AP 2/11/99	FL071
24	Acosta, Gregory	9/14/00	Walla Walla,WA	1987 Mercury Marquis	Walla Walla Union-Bulletin 9/15/00	WA15
25	Spouse, Destiny	5/30/01	Londonderry, OH	*	AP 5/31/01	OH67
26	Gates, Zoie	11/3/01	Anthony, KS	Ford F250	Hutchinson News, 11/7/01	KS16
27	Anthony, Damien	12/2/01	Seminole, OK	1986 Ford	Oklahoman, 12/5/01	OK30
28	Leslie, Samantha Ann	5/29/01	Willistown, PA	2001 Chevrolet Tahoe	Philadelphia Inquirer, 5/31/01	PA25
29	Niedzwiecki, Seth Michael	5/9/02	Nashville, IL	Unknown Pickup	Parental Contact	IL54
30	White, Nathan	6/17/02	Wichita, KS	1996 Dodge Intrepid	Kids and Cars	KS15
31	Alvarez, Abigail	10/31/02	Houston, TX	1993 Chevrolet	Houston Chronicle 11/2/02	TX121
32	Cruz, Wynter	11/16/02	Temecula, CA	Pickup	Press Enterprise 11/22/02	CA356
33	Johnson, Mitchell	4/16/03	Danville, IN	1998 Buick Regal	AP 4/16/03	IN56

*** Unknown or Unreported**

Attachment B

Center for Auto Safety

2001 S Street N.W., Suite 410
Washington, D.C. 20009
(202) 328-7700

1987 JUL 10 PM 3 08

July 8, 1987

Michael Brownlee, Director
Office of Defects Investigation
National Highway Traffic Safety Administration
400 7th Street SW
Washington DC 20590

PETITION

Dear Mr. Brownlee:

The Center for Auto Safety petitions the National Highway Traffic Safety Administration to initiate a defect investigation into rear power windows on all AMC vehicles that have substantially the same power window operating mechanisms as are used in 1982-86 Jeep Wagoneers.

The basis for this petition is that the Center has received reports of two deaths by strangulation when the power windows in a 1982 and a 1986 Wagoneer closed on two children. In the first case, Bob & Linda Shierlaw's 2-year old son was killed on November 25, 1984, in a 1982 Wagoneer when he turned on the key operated rear window from inside the vehicle. Even though he took his hand off the key, the window continued up and strangled him. (See enclosed March 16, 1986, letter to Ralph Nader.)

In the second case, 12-year old Brian Karp of Farmingdale NY was killed on July 3, 1987, when the rear power window on a 1986 Jeep Wagoneer closed on him. (Newsday, July 4, 1987.) Although it is not clear whether this power window closed in the same manner on this victim as the earlier child, the vehicle is available for the agency's inspection. The Center urges your office to do so and to require AMC to report all other cases known to it of rear power windows in any and all of its models closing on individuals regardless of whether death occurred.

Your prompt response indicating what action will be taken on this petition is requested.

Respectfully submitted,

Clarence M. Ditlow III
for the Center for Auto Safety

Enclosure

DUNSMOOR

May 6, 1966

Dr. William Haddon
Administrator, National Highway Safety Bureau
Department of Transportation
Washington, D.C.,

Dear Dr. Haddon:

I am writing this letter to urge you immediately to issue a public advisory warning of the dangers to children posed by electric power windows in automobiles, particularly those produced in the Fifties and early Sixties. These power windows were callously designed to thrust upward with cruel force and have strangled and injured thousands of children and infants. The most elementary engineering remedy could have avoided such vicious window speeds if auto company management cared more for human life and less for the aggressive and powerful performance of these upward bound glass guillotines. The remedy was known decades ago but only applied in some vehicles in recent years adequately.

Hundreds of thousands of automobiles with these death-dealing power windows are in operation on the roads and streets. Many permit the movement of these windows with the ignition off and consequently are potential booby-traps for playing children in these vehicles when their parents are away. For example, (1) August 20, 1957, Kathleen Hockett, a 2 year old girl from Wilmington, Delaware, was strangled when her head was caught in an automatically operated station wagon window. According to police, the family was attending a picnic at Our Lady of Grace home, Ogletown, when the child became tired and returned to the family station wagon. A short time later the girl's head was seen protruding from the rear window of the wagon. The window, which was operated by a button on the ceiling, had closed on the child's throat. In early April of this year, a little two year old boy (3) was strangled in West Los Angeles as he played with his smaller year old sister in their father's 1957 Lincoln. The ignition was not on, the boy had his head out the window and his sister innocently pressed the button. Three days after my letter to Mr. Bridwell warning of this problem dated April 24, 1966, a 6 year (2) old boy in Lynwood, California, was strangled when one of his playmates accidentally pushed the button activating the rear window of his family station wagon. These are not isolated examples; many other cases have come to the attention of safety councils around the country. Countless others involve children saved in the nick of time as they were turning blue. Adults are also injured: a woman passenger was flicking her cigarette out the window and lost her finger when her husband accidentally hit the button while driving in St. Louis, Missouri.

There is no question of adequate authority for you to issue a public advisory immediately. This action takes no research, no consultation with myopic industry spokesmen, no censing of the political winds. If such vehicles are not to be recalled and modified, then at the very least, you should inform the public

of this continual danger to children. It is sad enough to note that the Bureau has not seen fit to commence a policy of public warning advisories on the outrageously lethal and non-functional designs that adorn used automobiles, both outside and inside, as well as latent hazards. The Bureau has done nothing in this regard since its establishment in September of 1966. This has been the case even though there is no need to undergo the cumbersome administrative procedures characteristic of the Bureau's more formal responsibilities of standards-setting.

Dr. Haddon, as you know, I have written a number of detailed letters to your superiors which have not been replied to even though months have passed. Your replies have been far more prompt, where they have been made. This is a plea for action now to widely disseminate this warning throughout the land so as to increase the alertness of persons with such vehicles and to put the manufacturers on notice that henceforth such callous indifference will receive the dignified indignation of the federal agency with the mandate of protecting people from automobiles.

I look forward to positive action by the Bureau no later than May 20th which is more than ample time to issue such an advisory. This is not a problem new to the Bureau; you have been aware of this hazard for years and critically so. Please do not delay any longer what public authority in this country should have prevented over a decade ago were the rule of law extended to the auto industry.

Thank you for your consideration.

Sincerely yours,

Ralph Nader

CENTER FOR AUTO SAFETY
2001 S STREET, NW SUITE 410 WASHINGTON, DC 20009 202•328•7700

Immediate Release:
November 17, 1987

Clarence Ditlow
Debra Barclay

NHTSA TO INVESTIGATE JEEP WINDOWS THAT HAVE STRANGLED 5, KILLING 3

In response to a Center for Auto Safety petition, the National Highway Traffic Safety Administration (NHTSA) has agreed to investigate 140,000 1979-88 Jeep Wagoneers and Cherokees with electric rear tailgate door windows. In at least 5 cases, the rear door window key lock has stuck after being turned on by children in the vehicles. In each case, the power window continued to go up and closed against the child's neck or chest, strangling him or her. Two of the deaths occurred in July 1987 as shown below:

Date	Name	Age	Location	Vehicle	Death
7-31-87	Yergen	7	Yakima WA	86 Wagoneer	Yes
7-3-87	Karp	12	Farmingdale NY	86 Wagoneer	Yes
11-25-84	Shierlaw	2	Hickory Crnrs MI	81 Wagoneer	No
3-13-83	Bair	5	Garland TX	83 Wagoneer	No
5-27-79	Brinkley	13	Newport News VA	79 Wagoneer	Yes

According to Center Director Clarence M. Ditlow:

This is one of the most gruesome defects the Center has ever seen. Its young victims are caught unaware and suffer a slow, painful death. The anguish of their parents is untold. We urge AMC's Jeep Corporation to recall these deadly vehicles immediately before more innocent children are killed and maimed.

# # # #

Attachment C

COPY

April 7, 1998

B.M.W. of North America
Attn: Ken Schaeffer
1 B.M.W. Plaza
Montvale, New Jersey 07645

Re: DANGERS TO PASSENGER HANDS AND FINGERS; 740 IL. etc.

Dear Mr. Schaeffer,

We have the following requests as a result of the injury I suffered to my finger on March 12, 1998. If no reply is heard by April 11th, 1998, we will assume you do not wish to respond.

Report: At 4:12 p.m. on March 12, 1998 I was a passenger in my wife's "new" 1995 740 il. at the Grandview Business Center, 7056 Portal Way, Ferndale, Washington 98227. The car was parked and the window was open. I opened the door to exit at the same time my wife (new to the vehicle) had depressed the window "close" button on the driver's side. Thus, as I closed my door, three fingers of my left hand, which was over the window, became trapped between the rising glass and the frame. As I tried to extricate my fingers, my left middle finger was nearly severed. (See enclosed copy of E.R. Report).

We want to immediately warn all B.M.W. owners of this risk and ask that all dealers do so:

1. Will you, at our expense, mail an additional warning letter written by us and possibly edited by yourself to all owners of BMW's having this type of window system in North America? If not, will you provide us a mailing list for this purpose?

Coachman Inns of America
Hospitality Products

Harbor Lands Co.
Harbor Enterprises
Pacific Resources, Inc.

P.O. Box 4082
Bellingham, WA 98227
(360) 734-8191 734-2222
FAX (360) 647-9223

2. Have you previously sent any warning letters or additional technical letters concerning this matter to B.M.W. customers or dealers?

3. Have you had previous reports of injury or design change suggestions reported to you concerning these windows? If yes, will you advise us the nature of injuries, parties, etc.?

4. At present do you know of any litigation pending against BMW of North America which involves a claim for damages arising from personal injuries sustained by reason of this window sensor system?

5. Would you please provide copies of any reports, studies, memoranda, etc., which have been either produced and/or authorized by your technical people pertaining to this window sensor problem?

6. Do you have any design change or technical changes or posted warnings planned at this time?

7. Will you advise us which vehicles were manufactured in North America with windows of this type? (models/years) It is our immediate concern to avert any further injury to other persons with vehicles of this type. We would like to sell our vehicle and would not do so unless we could assume that a new buyer would have a satisfactory safety solution. For that matter, we feel uncomfortable operating it considering the hazard.

Thank you,

Joel S Douglas

Joel Douglas
600 Linden Road
Bellingham, WA 98225

Attachment D

DRAFT

AFFIDAVIT OF GAYLE WALKER
POWER WINDOW INJURY

At _____ p.m. on April _____, 1998 I was a passenger in our 19____ 735 il BMW. I pulled into our parking place at 405 Fieldston Road, Bellingham, to exit and enter our office. When exiting, I grabbed the top rail of the door, reaching over the rail with my fingers.

At the same time as I was doing that, my husband, Brittain, had shut off the ignition, which apparently caused the window to close at the same time. The window caught my fingers, causing me to scream for him to release the power. He couldn't do this quickly because by this time he had removed the keys.

My fingers are sprained, some bruised, but not broken. I am very upset about the safety of this vehicle and it most certainly taints my view of BMWs and their concern for safety.

Signed _____ Date _____

Notarized: _____ Date _____

C:\WUSD\Walker Aff

Attachment E

Attachment E

(51)

SEPTEMPER 15, 1998

FROM: STEVE BORDEN
TO: CENTER FOR AUTO SAFETY

DEAR CAS,

ON JANUARY 31, 1998 MY 14 MONTH OLD SON'S LEFT INDEX FINGER TIP WAS SEVERED BY THE LEFT REAR WINDOW OF MY 1997 ISUZU RODEO.

UNLIKE ANY OTHER SPORT UTILITY VEHICLE, MANY OF WHICH I HAVE EXAMINED, THE REAR WINDOWS MAKE A SIDEWAYS CUTTING MOTION INTO THE WINDOW FRAME AT THE REAR OF THE WINDOW WHERE A CHILDS BABY SEAT WOULD BE LOCATED.

THE OTHER VEHICLES WINDOW STAYS IN THE WINDOW TRACK ALL THE WAY UP.

I AM WRITING TO SEE IF YOU WOULD BE SO KIND AS TO INFORM ME OF ANY OTHER COMPLAINTS OR INJURIES OF THIS TYPE YPU ARE AWARE OF.

THANK YOU IN ADVANCE FOR ANY INFORMATION YOU MAY BE ABLE TO PROVIDE.
WITH BEST REGARDS,

Steve Borden

STEVEN L. BORDEN
8815 SOUTH POPLAR LAKE DRIVE
GERMANTOWN,TN 38138

PHONES:

901-761-9595
901-751-3855
901-485-9510

ENCLOSED IS A PHOTO OF MY SON'S FINGER PRYOR TO THE TIP COMMING OFF.

Attachment F

	REPORTED 1962 THRU 1999	CASES OF INJURY OR DEATH DUE TO POWER WINDOW DEVICES		
Case Name & Where	**Reporting source**	**When & what happened**	**Yr. & Make**	**fatal - inj- ?**
ARMANI, M Lynbrook, NY	Buick Motor Div.	7/6/92 - Driver's arm hit window switch on door & closed w/glass on mouth.	'91 Buick Regal	inj.
BASUS, CHRISTINA Los Angles CA	LA County Court	5/20/93 - 3 yr. old had window closed accidentally on her arm - by aunt.	'88 Ford Taurus	arm sevrd
BLAIR, LARRY Dallas, TX	GM Response to Baker v/s GM	3/1/3/83 - 4 yrs old - trapped by tailgate window	'83 JEEP Wagoneer	fatal
BOLAND, K. Carmel, NY	Chevy Motor Div.	3/30/90 - Claims window went up fast & caught fingers.	'89 Chevy Blazer	inj. ?
BRINKLEY, VERNON	GM Response to Baker v/s GM	5/27/79 - 13 yr old boy trapped by tailgate window - key stuck	'79 JEEP	fatal
BURT, H.F. Inkster MI	GM Customer Assistance	6/21/90 - Window closed on ring finger-	'90 Olds	inj.
CAVENAUGH, CHRISTOPHER Wayne County MI	Atty. Robert Libby Anchorage AK	7/1/62 - 3 yr. old boy trapped by power tailgate window .	? Family Sedan Wagon	inj/ reviv d by CPR
CHAPLIN, INEZ Ravenal, SC	Chevy Motor Div.	4/9/94 - Window closed on child - when reaching out for mail box -broke window	'92 Chevy Lumina	inj.
CRIM, R. Nederland, TX	Pontiac Motor Div	12/2/8/90 - 22 Month old baby's-finger cut off when power window was closed.	'82 Pontiac Bonneville	inj.
DUFRESNE, MACKENZIE Jacksonville, FL	Atty Lee T.Griffin Jacksonville FL	May 1988 - Child closed pass. window on neck. Placed hand accidentally on window control while standing on seat.	"94 - 2 Dr. Ford T'Bird	fatal
EVHEART, KAYLEE Kokomo, IN	Kokomo Tribune "Mike Fletcher"	10/12/98 - 2 Yr. old girl closed sunroof on neck.	'98 Dodge Neon	fatal
GATLIN, TAYLOR Florence, AL	Atty. G Yearout Yearout Myers Birmingham, AL CV-97-609 civil action Lauderdale CO	10/03/97- 3 yr old boy climbed onto arm rest, acciently pressed window lift switch. Strangled - not revived	'93 Mercury Topaz	fatal
GOLDBERG, HIRSH Baltimore, MD	GM Response to Baker v/s GM	11/7/72 - 3 yr old - strangled by tailgate window	'72 Olds Vista wagon	fatal
HOLUM, KIMBERLEY Whitehall, WI	Trempealeau Co. Ct. Crt #95-CV-74	11/20/93 - 4 yr. old contacted power window control on pass door - strangled - not revived	'93 Chevy Silverado Pick up.	fatal
HOUSEHOLDER, KALEY Hilliard, OH	Common Please CT Perry Co. Ohio Case #22686	6/8/92 - 3 yr. old hit window switch on pass. door - strangled - not revived	'87 Plymouth Voyager	fatal

KARP, BRIAN Farmingdale, NY	GM Response to Baker v/s GM	7/3/86 - 12 yr old - trapped in tailgate window - while closing.	'86 JEEP Wagoneer	fatal
KIRWIN, KAREN LaCross WI	Automotive News & Atty James Koby	7/17/99 - 4 year old injured by power window - 3 other children in truck.	'95 Chevy Silverado Pick up.	inj.
KNOCKETT, KATHLEEN Wilmington Del.	Atty. Robert Libby Anchorage AK	8/20/67 - 3 yr. old girl trapped in power tailgate window.	Station Wagon	fatal
KUEHN, L. Milwaukee, WS	Atty. David Easton Madison WS	2/2/92 - Lad trapped in side power window while washing fathers van	'89 Ford Aerostar	inj/ fatal
LARKIN, R. Edina, MN	Chevy Motor Div.	9/13/90 - Caught finger in window while attempting to close same by pulling up.	'90 Van Model V-3	inj.
LESZCZYNSKI, K. Newburg NY	GMC Truck & Bus	9/2/92 - Sons fingers caught in power window .	'92 GMC Jimmy	inj./ ok
LUTH, J. Saginaw, MI	Oldsmobile Div.	4/4/93 - Window closed on child - when reaching out for mail.	'93 Olds Supreme	no inj.
MATIE, M. Dallas, TX	Atty. Donna Taylor	9/27/93 - Child closed window on neck - window lock was "on", engine off.	'92 Cadillac Seville	inj. / bad
McNALLY, M. Laverne CA	Chevy Motor Div.	10/13/92 - Window closed, broke two fingers. Fire dept. freed fingers.	'90 Chevy Model r-3	inj.
MEYERS, CRIS Sidney , IA	GM Response to Baker v/s GM	4/14/69 - 8yr old - caught in Tailgate Power window	Mercury wagon	fatal
MOBLEY, ANGELA Lansing MI	Atty. Robert Libby Anchorage AK	8/27/68 - 1-1/2 yr. old climbed on arm rest and ran window up trapped by neck.	? sedan	fatal
NAZZAL Lakeside CA	Pontiac Motor Div	8/27/91 - Son's knee hit window switch trapping neck-mother cut bad breaking window	'88 Pontiac Bonniville	inj. to mothr
OGANOWSKI, S. Scranton PA	Cadillac Motor Div	7/16/90 - Nephew had leg on arm rest - "widow locked on neck" removed window	'86 Cad. DeVille	inj / ok
PERLMUTER, R. Pepper Pike, OH	Buick Motor Div.	6/30/99 - Reports dog trapped in window -	'85 Buick Park Ave.	dog inj. ?
RICE, TIFFANY Birmingham, AL	B'ham News 2/24/89	1/20/89 - Child closed rear window on neck-hit power window switch.	Olds Delta 88 model	fatal
ROBISH, Shiller Park , IL	Cadillac Motor Div	7/1/90 - Daughters knee on window switch \ child unconscious	'86 Cad DeVille	inj.
SAWEK, S. Rebbetta OH.	Chev Motor Div. Letter to Chevy	8/6/91 - Son hit button, head caught in window - concerned about power windows	'90 Chevy Lumina	inj / ok
SCOTT, EDWARD Stamford CT	Atty. A Piazza Stamford CT	4/25/98 - Adult male lost finger from express "UP window on drivers side.	'95 BMW	inj.
SHIERLOW, family Hickry Corners, MI	GM Response to Baker v/s GM	11/25/84 - 2 yr old - trapped when turning key in tail gate window	'82 JEEP Wagon	inj rev'd

SPRINKLE, CLARENCE York, PA	GM Response to Baker v/s GM	7 / 1980 - 8 yrs old - trapped by tailgate window.	'71 Ford Torino	fatal
STANT, Polly Merritt FL	NHTSA Owners Questionnaire	4/28/88 - Dog stepped on window switch - choked. - Owner complained	'88 Olds Royal	inj.
TEAGUE, ROBERT Troy AL.	Atty. Cole Portis Beasley Wilson Birmingham AL	4/08/97 2 yr 6 mo - old boy climbed onto arm rest accidentaly pressed window lift switch, window could not be lowered. Strangled - not revived	'90 Mercury Topaz	fatal
WALKER-HIME Springfield, NJ	Atty. Jack Wurgaft Springfield NJ	11/21/95 - Child closed window on neck with leg on seat & knee on window switch	'84 Buick Park Ave	fatal
WALTON Delaware CO. PA	GM Response to Baker v/s GM	3/2/70 -6 yr old - strangled by power tailgate window	'61 Chevy wagon	fatal
WESTHUSING, Anchorage AK.	Let to Atty. R.Libby	1/30/97 - Child put knee on window switch \ trapped neck	'89 Wag Taurus	inj.
Following List supplied by Ford Gen Council as Non-Litigated alledged inj, or death by Power windows				
ADKINS. NATALIE "OHIO"	6/23/95 Ford Gen Counsel Johnson v/s FORD	Staus closed 6/29/95	'93 Tempo	?
GROSS, MIKE "IOWA"	10/20/96 Ford Gen Counsel - Johnson v/s FORD	Staus closed 10/23/96	'93 Tempo	?
SMITH, LARRY "MICHIGAN"	7/24/96 Ford Gen Counsel - Johnson v/s FORD	Staus closed 7/29/96	"92 Tempo	?

wndotrap (pxlist) REV.10/03/99

Attachment G

brose

BOSCH

Power Window Anti-Trap Systems

for US - Automotive Applications

Detroit, April 1996

5 Anti - Trap Market:

(model year 1996)

car-type	power regs.	with anti trap	central closing	central opening	one shot up	one shot down
AUDI						
A 4		I	X		X (2)	X
A 6		I	X		X (2)	X
A 8		I	X		X (2)	X
BMW						
3er		Z			X (2)	X (2)
5er		T	X	X	X (2)	X (2)
7er		T	X	X	X	X
8er		T	X	X	X (2)	X (2)
FORD						
Fiesta	X					
Escort	X					X (1)
Mondeo	X					X
Galaxy		I	X	X	X	X
Scorpio		T (1)	X	X	X (1)	X
Honda						
Accord	X		X			X (1)
MB						
C-class			X	X		X
E-class			X	X		X
S-class		Z	X	X	X	X
Mitsubishi						
Carisma		I	(X)		X	X
OPEL						
Corsa		I			X (2)	X (2)
Astra		I	X		X	X
Vectra		I	X		X	X
Omega		I	X		X	X
Calibra		I	X		X	X
Peugeot						
605		I			X (1)	X (1)
405		I	X		X (1)	X (1)
Renault						
Laguna		I	X		X (1)	X (1)
Espace	X				X (1)	X (1)
SAAB						
900	X					X (1)
9000	X					X (1)
Toyota						
Carina	X					X (1)
VW						
Polo	X					
Golf		I	X	X	X	X
Passat	X		X	X		X
Sharan		I	X	X	X	X
VOLVO						
4er	X					X (1)
8er	X					X (1)
9er	X					

T = door electronic
Z = central electronics

I = integrated electronics (Smart Motor)

(1) = only drivers door
(2) = only front doors

Attachment H

NARTRON CORPORATION
the Smart Power source
5000 NORTH US-131
REED CITY, MICHIGAN 49677-0207
231.832.5525
Fax 231.832.3876

August 14, 2003

Fax: 913.851.0086

Ms. Janette Fennell, President
KIDS AND CARS
14413 Norwood
Leawood, KS 66224

Dear Janette:

Thank you for your telecon of today.

Responding to your question of "what does it (anti-entrapment capability) cost per window?"

Answer: Anti-entrapment adds $12.50/window to the cost of the vehicle using the Nartron non-contact product.

Janette, again, you have our full support and good luck at the Press Club next Tuesday.

Best regards.

Yours sincerely,

Heather Huber

Heather Huber, Vice President
Corporate Administration

Attachment I

PO Box 458
Ross, CA 94957
October 29, 1989

Ralph Nader & Assoc.
2000 P St., N.W.
Washington, D.C.
Tel: 202-785-3704

Dear Mr. Nader,

I recently had an experience that could, had circumstances been only slightly different than they were, have ended in catastrophe. I was taking my 5-year old grandaughter for a drive in my 1986 Ford Taurus, with my grandaughter in a child's safety seat located in the back seat of the car. During the drive, she was properly buckled into the child-seat, and I opened the window next to her for her comfort.

After I parked the car, I used the electric window switch to close her window. Without my knowledge, she had unbuckled herself and stuck her head out the window prior to my closing it. She screamed as I closed her window, and the action that I subsequently took prevented serious injury.

It has occurred to me that there may be many such cases where children (or perhaps adults also) are injured by closing electric windows in cars. I'd like to suggest that auto manufacturers design electric windows with some sort of clutch or other safety mechanism that prevents the exertion of large forces by the window in the event that any object is sticking out of the window. Elevator door manufacturers already use this kind of technology for the safety of elevator passengers, so the technology already exists and is in wide use. Electro-optical devices are also used in many elevator doors to prevent door closure when a light beam is interrupted by a person, cart, etc.

I would appreciate hearing from you or your organization regarding your opinion of the feasibility and/or desirability of implementing such a safety feature in all future models of cars that feature electric windows.

Thank you for your attention to this matter. I look forward to your reply.

Sincerely yours,

Arnold W. Marquez

Attachment J

July 17, 1989

Sue A. Tuemler
2810 Hinde Avenue
Sandusky, OH 44870

Mr. Ralph Nader
Center for Auto Safety
2000 P Street, N.W.
P. O. Box 19367
Washington, D. C. 20036

Dear Mr. Nader:

I'm very interested in obtaining information regarding the dangers of electric-powered windows in automobiles.

Recently, my mother was driving her four-door Chrysler in which all the power windows could be controlled at the driver's seat. Unaware that her traveling companion had her hand on top of the partially open window, my mother operated the control and her passenger's finger was amputated when the window closed. We are both extremely upset and concerned about this danger.

I've enclosed a stamped, self-addressed envelope for any information you may be able to send us. If you have any questions, I may be reached weekdays at (419) 627-8531.

Very truly yours,

Sue A. Tuemler

Sue A. Tuemler

Attachment K

Mfgr	Date	Age	Win-dow	Name	Location	Comment
Dodge Monaco SW	7/1/62	3	TG	Chris Cavanaugh	Detroit, MI Wayne Cty	INJURY ONLY Near Strangulation, NHSB Advised GM on 11/6/69
unknown	7/62	3	unk	Anonymous	unknown	DEATH (NHSB advised GM) NSC Mag
unknown	5/21/66	2		Jon Carnoali father = Edward	Kansas City KA	INJURY ONLY Near strangulation 9 days hospital coma, reported in Detroit paper
1958 Plymouth SW	5/66	unk.	TG	Anonymous	Detroit, MI Wayne County	DEATH Atty David Goldman Detroit(ATLA)
Unknown	SPR, 67	28	unk.	Anonymous	unknown	INJURY ONLY (NHSB advised GM) NSC Mag finger
SW	8/20/67	3	TG	Kathleen Nockett	Wilmington, DE Newcastle City	DEATH (NHSB advised GM
1957 Lincoln	4/68	2	unk.	Anonymous	W. L.A., CA Los Angeles County	DEATH (NHSB Advised GM) (Second Child involved)
	4/27/68	7		Richard Price	Dunsmuir, CA	DEATH (NHSB advised GM
SW	7/30/68	1.5	TG	Kelly Chermock	San Mateo, CA San Mateo County	DEATH (NHSB advised GM

??	11/29/68	1.5	Rear	Angela Mobley	Lansing, MI Ingham County	DEATH (NHSB advised GM
Mercury SW	4/14/69	8	TG	Chris Meyers	Sidney, IO Fremont County	DEATH (NHSB advised GM
1961 Chev SW	3/2/70	6	TG	Rosemary Walton	Upper Darby, PA Deleware County	DEATH (NHTSA file) Philadelphia Bulletin
1965 Chrysler Imper.	8/29/72	unk.	side	Anonymous	Wichita, KA Sedgwick	DEATH ATLA atty Jerry Levy 913-749-1323
Olds VistaCruiser	11/7/72	3	TG	Jonathan Goldberg	Baltimore, MD Baltimore County	DEATH Hirsch Goldberg father 410-486-4150 H 410-339-7334 O
American Motors 79 Wagoneer	5/27/79	13	TG	Brinkley, Keith	Newport News, VA Isle of Wight	DEATH NHTSA head caught NN or Richmond, VA atty involved
1971 Ford Torino SW	7/80	8	TG	Julie Ann Sprenkle (child) Clarence Sprenkle V. Ford	York County, PA.	INJURY ONLY ATLA atty William Haggerty, Lancaster Child's parents bowling, child went to retrieve something from car, found in tailgate window. Near strangulation Brain damage/Hypoxia Judge Caldwell/ Federal court

1971 Ford Torino SW	5/81	4-6	Tailg ate.	Anonymous	White Plains, NY Westchester County	DEATH ATLA atty John Kelligrew.White Plains, NY 914-948-7000
American Motors 83 Wagoneer	3/13/83	4	TG	Bair, Larry Ryan	Longview, TX, Gregg Cty	INJURY ONLY NHTSA Dallas atty Ray Walker near strangulation
American Motors 81 Wagoneer	1/1/84	unk.	TG	Anonymous	Unknown	DEATH NHTSA ODI ID # 148708
American Motors 84 Wagoneer	1/84	17	TG	Ogg	Omaha, NE Douglas County	INJURY ONLY NHTSA hand caught
American Motors 1982 Wagoneer	11/25/84	2	TG	Shierlaw	Hickory Corners, MI	INJURY ONLY NHTSA Mrs. Wrote to Nader saying delayed because felt it her fault. Appeared in Automotive News on 7/20/87 near strangulation
American Motors 86 Wagoneer	7/3/87	12	TG	Karp, Brian	Farming-dale, NY Nassau	DEATH NHTSA Appeared in Automotive News on 7/20/87
American Motors 86 Wagoneer	7/31/87	7	unkn .	Yergen, Ted	Yakima, Wa.	Death Center for Auto safety letter dated 11/17/87

1981 Jeep Grand Wagoneer	10/21/87	Child	Tailgate	Anonymous	Unknown	NHTSA INJURY ODI ID # 148708 Key operated tail gate window continued to raise after key removed, child's neck raised and hung by neck.
1988 Olds Delta Royale 88	4/28/88	Adult	unk.	Polly W. Stant, Dog owner	Merritt Island, FL	NHTSA OD ID # 31362 (407)453-8542
Olds Delta 88	1/24/89	2	RR	Rice, Tiffany	Birmingham, Alabama Jefferson County	DEATH AJ of FM&P, Dr Gary Simmons. While GG Louise Louis driving, accidental closure on child. Established measurement of child's arm length.
1989 Ford T'bird	3/20/89	Adult	RF	Unknown	Crosby, TX	NHTSA ODI ID # 469549 Wife accidentally actuated the window,crushing and partially severing right hand middle finger
1989 Ford sedan	9/18/89	5 -8	side	Anonymous	Minneapolis, MN Ramsey County	INJURY ONLY Atla Atty John Ramstead, Minn, MN Injury to finger
1989 Ford T'bird	11/9/89	3	side	Graffius, Robert R. and Regina (304)369-5609	Madison, West Virginia	NHTSA recent print-out P. 127 inadvertent operation ODI ID # 349210

1989 Ford Taurus	3/4/91	adul t	RF	Paul W. Glowacki	Cedar, Michigan	NHTSA PRINTOUT ODI ID# 382769
Ford Taurus	1991 unk at present	8 and 5	RF	Kaley and Emily Westhusing	Anchorage, Alaska	Statement from Mother, Paula Westhusing, 907-345-6246
88 Pontiac Bonneville	8/27/91	4	RR	Nazzal, Vincent	San Diego, CA San Diego County	INJURY ONLY mother cut arm while rescuing child from near strangulation
1989 Ford Crown Victoria	9/18/91	??	??	ODI ID No. 403031	??	??
1989 Ford Victoria LTD	11/18/91	adul t	RF	Helen Cullinan, (703)415-1763 Reported by John F. Cullinan, Chesapeake Beach, MD	Chesapeake Beach, MD Calvert Co.	ODI ID # 403031 74 year old woman lost the end of her finger when the switch was operated by the driver. Also mailed to NHTSA was an article on danger to children from power windows
1989 Ford Aerostar Van	2/2/92	10	RF	Kuehn, Luke D.	Madison, WI Dane County	DEATH ATLA atty David Easton Child older (washing car)

1986 Olds 98	4/29/92	2	unk	Anonymous	unknown	NHTSA ODI ID # 439116 Child in seat of non moving vehicle, put head out of window, knee on arm rest where window switch located. Trapped and crushed by neck. NEAR STRANGULATIO N
1991 Lincoln Continent	8/15/92	5	all four	Anonymous	Delaware	NHTSA OD ID # 437252 NHTSA recent print-out P. 129 accidental operation-2 children injured called design fault
1987 Plymouth Voyager	6/8/92	<4	side	Household-er, Kaley	Hilliard, Ohio Franklin	DEATH
1992 Cadillac Seville	6/29/92	??	??	ODI ID No. 434980	Pompano Beach, Fl.	Head Caught??
1991 Mercury Sable	<7-21-92	??	RF	ODI ID No. 438665	E.Hartford, Ct.	INJURY ONLY severely bruised hand
1988 Ford Taurus	5/20/93	3	RR	Basua, Christina	L.A., CA Los Angeles County	INJURY ONLY ATLA atty John Heubeck arm amputated
GM 1993 Chev p/u	11/30/93	4	RF	Holum, Karen	Whitehall, WI Trempealea u County	DEATH

GM 1994 Chev p/u	4/19/94	4	RF	Baker, Daniel Alan	Anchorage, AK	DEATH
1994 Ford Taurus	5/27/94	3	R	Unknown at this time	Philadelphia, PA Philadelphia County	INJURY ONLY ATLA Martin Thomas (finger amputation) (215)977-7070
1994 Chrysler New Yorker	3/08/95	Unk.	Unk.	Anonymous	Unknown	INJURY ONLY NHTSA ODI ID # 960044
1984 Buick Electra	11/21/95	2.7	RR	Walker-Hime, Carolyn dob 3.3.93	Plainfield, N.J. Union Co.	DEATH ATLA Jack Wurgaft (201) 379-4200
1991 Dodge Caravan	3/13/96	child	passenger side	Anonymous	Unknown	NHTSA ODI ID # 980738
1995 Mitsubishi Galant (Eclipse has safe switch)	7/26/96	?	RR	Anonymous	Unknown	INJURY ONLY NHTSA ODI ID # 800484 owner injured finger-called design fault
??	66-78	3av	??	2 children	Seattle	DEATHS COHMC from Feldman/Simms tbl
??	1977 all	3av	??	2 children none are reported above	nationwide	DEATHS USCPSC death cert
??	1977 all	3av	??	1 child not reported above	nationwide	DEATH USCPSC in-depth

??	1960-81	0-14	??	9 children (6 of whom are not reported above)	All of Cal	DEATHS Jess F. Kraus,MPH, PhD, Public Health Reports, Mar/Apr, 1985 (Only 3 Cal deaths are listed above, so we may be picking up less than ½ the incidents. One death of a 3 yo that appeared in the NSC Mag in the same time frame is possibly a Cal death)
TOTALS GM=10 Ford=18 Chrys=5 Am. M=7 Other=1 Unk=18 Total 58 34 confimed deaths	5 in 91- 1 GM 7 in 92- 2 GM 2 in 93- 1 GM 2 in 94- 1 GM 2 in 95- 1 GM 2 in 96 20 in last 6 yr			18 and possibly 22 anonymous children died	21 states report accidents, in 7, the place is unknown, possibly 29 states are unrepre-sented or unreported	57 deaths or injuries among children, and one 28 yo man and a 74 yo woman. However, 7 occurred in 92-94 so over 37 yrs you would expect about 86 total. In 1966-78, there were 2 deaths in Seattle alone. Cal had at least 9 deaths in the 36 yr study period. Power windows were uncommon in '60s.

Attachment L

KIDS AND CARS

LOVE THEM, PROTECT THEM

www.kidsandcars.org

Summary of Power Window Deaths and Injuries

DATE	CITY	ST	AUTOMOBILE TYPE	CHILD AGE	RESULT*
April 16, 2003	Danville	IN		11 yrs	Death
November16, 2002	Temecula	CA		6 yrs	Death
October 31, 2002	Houston	TX	1993 Chevrolet	3 yrs	Death
June 17, 2002	Wichita	KS	1996 Dodge Intrepid	2 yrs	Death
June 2002	Nash	OK	Ford F250	16 mos	Hospitalized
May 9, 2002	Nashville	IL		2 yrs	Death
January 29, 2002	Pittsburgh	PA		6 yrs	Hospitalized
November 22, 2001	Spring Green	WI		2 yrs	Hospitalized
November 2001	Anthony	KS		2 1/2 yrs	Death
August 2001	Seminole	OK		15 yrs	Death
June 2001	Whitewood	IN	Toyota4Runner	3 yrs	Severe brain injury
May 30, 2001	Londonderry	OH	1996 Chevrolet Blazer	2 yrs	Death
May 29, 2001	Willistown	PA	2001 Chevrolet Tahoe	5 yrs	Death
May 2001	Seiling	OK	Mercury Lincoln Continental	2 yrs	Severe brain injury
September 14, 2000	Walla Walla	WA	1987 Mercury Marquis	3 yrs	Death
February 9, 1999	Fort Myers	FL		2 yrs	Death
October 10, 1998	Kokomo	IN	1998 Dodge Neon	2 yrs	Death
July 1998	King County	WA		99	Death
May 5, 1998	Chesterland	OH	1996 Ford Econoline	3 yrs	Death
May 1998	Jacksonville	FL	1994 Ford Thunderbird	2 yrs	Death
March 6, 1998		XY	1995 Chevrolet Sierra	6 yrs	Injury
January 7, 1998	Ottumwa	IA	1986 Oldsmobile	3 yrs	Death
October 3, 1997	Florence	AL	1993 Mercury Topaz	3 yrs	Death
August 1997	Provo	UT		3 yrs	Death
April 8, 1997	Troy	AL	1990 Mercury Topaz	2 yr 6 m	Death
August 7, 1996	Ceresco	MI	1992 GMC Safari	3 yrs	Death
July 26, 1996			1995 Mitsubishi Galant		Injury
March 13, 1996			1991 Dodge Caravan	child	Injury
November 21, 1995	Plainfield	NJ	1984 Buick Park Avenue	2.5 yrs	Death
March 8, 1995			1994 Chrysler New Yorker		
May 27, 1994	Philadelphia	PA	1994 Ford Taurus	3 yrs	Severed limb
April 19, 1994	Anchorage	AK	1994 Chevrolet	4 yrs	Death
April 9, 1994	Ravenel	SC	1992 Chevrolet Lumina	5 yrs	Injury
November 20, 1993	Whitehall	WI	1993 Oldsmobile	4 yrs	Death
September 27, 1993	Dallas	TX	1992 Cadillac Seville	3 yrs	Injury

May 20, 1993	Los Angeles	CA	1988 Ford Taurus	3 yrs	Severed limb
April 4, 1993	Saginaw	MI	1993 Oldsmobile Supreme	99	Injury
September 2, 1992	Newburg	NY	1992 GMC S-Jimmy	99	Injury
August 25, 1992	Newark	DE	1991 Lincoln Continental	5yrs	Injury
July 21, 1992	East Hartford	CT	1991 Mercury Sable		Injury
June 29, 1992	Pompano	FL	1992 Cadillac Seville		Injury
June 13, 1992	Birmingham	AL		26 mos	Death
June 8, 1992	Hilliard	OH	1987 Plymouth Voyager	3 yrs	Death
April 29, 1992		UT	1986 Oldsmobile Ninety-eight	2 yrs	Injury
February 2, 1992	Milwaukee	WI	1989 Ford Aerostar	10 yrs	Death
November 18, 1991	Chesapeake Beach	MD	1989 Victoria LTD Ford	74 yrs	Injury
August 27, 1991	Lakeside	CA	1988 Pontiac Bonneville	3 yrs	Injury
August 6, 1991	Rebbetta	OH	1990 Chevrolet Lumina	11 yrs	Injury
July 6, 1991	Lynbrook	NY	1991 Buick Regal	73 yrs	Injury
March 4, 1991	Cedar	MI	1989 Ford Taurus		Injury
December 28, 1990	Netherland	TX	1982 Pontiac Bonneville	22 mos	Injury
September 13, 1990	Edina	MN	1990 Chevrolet V3	39 yrs	Injury
July 16, 1990	Scranton	PA	1986 Cadillac	3 yrs	Injury
July 1, 1990	Schiller Park	IL	1986 Cadillac Deville	7 yrs	Injury
June 21, 1990	Inkster	MI	Oldsmobile		Injury
March 20, 1990	Carmel	NY	1989 Chevrolet Blazer T2	24 yrs	Injury
November 9, 1989	Madison	WV	1989 Ford Thunderbird	3 yrs	Injury
September 18, 1989	Minneapolis	MN	1989 Ford Sedan	5-8 yrs	Injury
June 30, 1989	Pepper Pike	OH	1985 Buick Park Avenue	1 yr	
March 30, 1989	Crosby	TX	1989 Ford Thunderbird		Injury
January 20, 1989	Birmingham	AL	1983 Oldsmobile Delta 88	26 mons	Death
July 31, 1987	Yakima	WA	1986 American Motors Jeep Wagoneer	7 yrs	Death
July 2, 1987	Farmingdale	NY	1986 American Motors Jeep Wagoneer	11 yrs	Death
November 25, 1984	Hickory Corners	MI	1982 Chrysler Grand Jeep Wagoneer	2 yr	Injury
April 4, 1984	Omaha	NE	1983 American Motors Jeep Wagoneer	17yrs	Injury
January 1, 1984			1981 American Motors Wagoneer		Death
March13, 1983	Dallas	TX	1983 American Motors Jeep Wagoneer	5 yrs	Hospitalized
July 1980	York	PA	1971 Ford Torino	8 yrs	Death
April 3, 1980	White Plains	NY	1971 Ford Torino	9 yrs	Death
May 27, 1979	New Port News	VA	1979 American Motors Jeep Wagoneer	13 yrs	Death
November 7, 1972	Baltimore	MD	1972 Oldsmobile Vista Cruiser	3 yrs	Death
August 29, 1972	Wichita	KS	1965 Chrysler Imperial		Death
December 18, 1970	Kentwood	MI	1968 Ford Torino	5 yrs	Death
March 2, 1970	Upper Darby	PA	1961 Chevrolet	6 yrs	Death
April 14, 1969	Sidney	IA	Mercury	8 yrs	Death
November 27, 1968	Lansing	MI		18 mos	Death
July 20, 1968	San Mateo	CA		18 mos	Death
April 27, 1968	Dunsmuir	CA		7 yrs	Death

April 1968	West Los Angeles	CA	1957 Lincoln	2 yrs	Death
August 20, 1967	Kingston	DE		3 yrs	Death
May 21, 1966	Kansas City	KS		2 yrs	Coma
May, 1966		MI	1958 Plymouth	99	Death
					Near Death
July 1, 1962	Detroit	MI	1962 Dodge	2 1/2 yrs	Injury
July 1962				3 yrs	Death
1984	Laurel	MD	GMC	4 yrs	Injury
1991	Anchorage	AK	1989 Ford Taurus	8 yrs	Injury
1997	Phoenix	AZ	1997 Chevrolet Lumina	2 yrs	Death
1997	San Diego	CA	1995 Chevrolet Lumina	3 yrs	Death
	Oren	UT	1986 Oldsmobile Ninety-eight	2 yrs	Injury
			1984 Honda Civic		Severed limb
			1987 GMC Jimmy		Severed limb

*More information available upon request.

Attachment M

From ATLA

Concluded Cases on Power Windows And Strangulation

1. Goldberg v. General Motors

RTYP: Case Abstract
CITE: No. 92560 Doc. 105 Fol. 20 (Baltimore Cty. Ct. Md., June 3, 1977) 20 ATLA L. Rep. 434 (November 1977).
DATE: 1977

ABST: Lug of lock on rear window of 1972 Oldsmobile Vista Cruiser, 3 year old boy took key to his father's car, inserted and turned it in the outside lock and leaned through the rear window. Window continued to rise after boy let go of key. Lock designed to spring back to off position when key released, but here lug of lock projected beyond cam face, interfering with spring back, probably caused by pulling a stuck key out of the lock on previous occasion. Window pulled boys torso up by neck causing strangulation, brain damage and ultimate heart failure from which he dies within a week. Settled for $190,000.

CNSL: Israelson, Max R., Baltimore, Md.

Power Windows Regulations

2. FMVSS, Power-Operated Window Systems
RTYP: Regulatory Chronology
PUB: Federal Register, v56 n73 p15290-15295
DATE: April 16, 1991

ABST: This rule amends standard 118; power operated window systems. It extends the standard to encompass power operated roof panels. It also established requirements for power window control systems located on the vehicle exterior and for remote control devices. The purpose of the standard is to minimize the risk of personal injury that may result if someone is caught between a closing power operated window and the window frame.

3. GM denies NHTSA request to recall one million 1981-1983 passenger cars with potential door lock fire problems.

RTYP: Regulatory Chronology
Date: October 18, 1985
ABST: In a Sept. 4, 1985 letter to GM, NHTSA asked the company to recall about one million 1981-1983 passenger cars because of potential door lock fires. The recall request involves GM's "C" and "E" body luxury cars including the Cadillac, Buick and Oldsmobile models. NHTSA indicated that 77 percent of the consumer reports involved 1983 models. Half of the reports alleged the power window switch as the source of the fire and 11 report the power door lock switch as the source of the fire. On Oct. 17, GM indicated that no recall is planned because there were few cases and no injuries reported. Source 13 BNA Prod. Safety And Liab. Rptr. 792 (Oct 18, 1985).

Reports of Incidents from ATLA Members

The names and addresses of the reporting attorney are confidential. If you need further information, the ATLA Exchange can try to retrieve updates on these cases from the plaintiff's attorneys. In the alternative, Exchange personnel can contact the attorneys and ask that they contact you with further information.

4.
RTYP: Inquirer
ADDR: Detroit, MI 48226
DATE: 5/66
ABST: Negligent design of power window in 1958 Plymouth station wagon. Motor shut off, children left unattended in car. Child got head caught in window and was asphyxiated.

5.
RTYP: Inquirer
ADDR: San Pedro, CA 90731
DATE: 9/76
ABST: 1974 Chevrolet Camaro 2 door. Passenger attempted to roll up window. Difficult to roll up and as window reached fully closed position it explode. Glass fragments struck passenger in the eyes and thrust her towards the driver.

6.
RTYP: Inquirer
ADDR: Lancaster, PA 17604
DATE: 7/80
ABST: 1971 Ford Torino Stationwagon. Defective microswitch mfrd. by Singer. Rear window continued to go up when pressure released from key. Strangulation.

7.
RTYP: Inquirer
ADDR: White Plains, NY 10601
DATE: 5/81
ABST: 1971 Ford Torino Stationwagon. While inside vehicle operated outside w\switch with key. Key system malfunction. Death.

8.
RTYP: Inquirer
ADDR: Minneapolis, MN 55402
DATE: 9/18/89
ABST: Client lost a portion of a finger when it was caught by a rising power window of a new Ford automobile.

9.
RTYP: Inquirer
ADDR: Milwaukee, WI 53202
DATE: 7/24/92
ABST: 1989 Ford Aerostar van. Inadvertent contact with power window button caused child's neck to be caught between top of window and window frame. Anoxia-brain damage.

10.
RTYP: Inquirer
ADDR: Anchorage, AK
DATE: 5/12/94
ABST: 1994 Chevrolet Pickup. Decedent was left alone in pickup with keys in ignition in off position. Decedent head was caught in power window. Fatal.

11.
RTYP: Inquirer
ADDR: Anchorage, AK
DATE: 5/17/94
ABST: Duplicate of above.

12.
RTYP: Inquirer
ADDR: Philadelphia, PA 19103
DATE: 5/27/94
ABST: 1994 Ford Taurus. Woman driving with three year old son in rear seat. She reached back to turn on window lock, but hit the up button by mistake. Child's finger caught in window. Suffered loss of finger at first phalanx.